ABSTRACT OF THE DISCLOSURE

A double-ring optical wavelength multiplex network is disclosed, which includes multiple optical transmission apparatuses that can reduce the unit cost of initially installing a small optical network while providing the flexibility to expand. For multiplexed optical signals arriving at a node, the optical transmission apparatus "drops" selected wavelengths for local delivery and "passes" others for continued transmission on the network. For optical signals originating ("added") at the node, the optical transmission apparatus wavelength multiplexes the "added" signals with the "passing" signals for transmission on the network. For "added" signals, the optical transmission apparatus blocks "passing" signals of the same wavelength.